Statement of Purpose

Form Title

Please highlight your academic preparation and motivation; interests, specializations and career goals; and fit for pursuing graduate study at UC Davis.
may include your academic and research experiences that prepare you for this graduate program (for exa

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I am applying for the PhD program in Communication at UC Davis to pursue my interest in studying social influence in social networks and the spread of online misinformation.

I began my graduate career at Renmin University of China, where I focused on international communication and the digital divide. I evaluated the outcome of China's media "Go Global" strategy, and examined how the emerging digital divide reinforced rural-urban educational inequality. Feeling restricted by qualitative research, I decided to obtain training in quantitative methodology by pursuing a second master's degree in the United States. At Indiana University, I conducted three studies on selfies: I compared White and Chinese women's selfies from the perspective of self-sexualization, investigated gender stereotypes in Chinese women and men's selfies, and explored factors associated with selfie-editing. My research output is four peer-reviewed conference presentations, one of which won a top student paper award.

The studies I have done allowed me to gain valuable knowledge of how people use social media, but they missed the broader picture of how media technologies impact the society. Professor Yong-Yeol Ahn's class made me realize that network analysis provides an ideal approach to studying the social impact of digital technologies.

My first research idea is to investigate social learning in social networks. Specifically, I am interested in how individuals reevaluate their beliefs and behavior after interacting with their social connections. There are conflicting findings regarding how exposure to opposing views affects belief polarization, and whether network homogeneity benefits social learning. To examine this, I seek to conduct an experimental study comparing the effects of heterogeneity and homogeneity in networks on reducing biases. Another question regarding social learning concerns network centrality. Egalitarian networks, where people are equally influential, are conducive to building accurate consensus within groups. In real life, however, people's influences naturally diverge, as witnessed in modern social media environments. This leads to the question: When building an online community, how can we reduce the disproportionate influence some individuals have on others? In terms of influence in social media networks, it often falls on a continuum rather than on dyadic ends. I am interested in exploring which segments of an influence distribution are most powerful in shaping the group belief, what characteristics do individuals in these segments share, and whether this pattern varies across different forms of social networks.

My second research interest is in identifying individuals most vulnerable to misinformation. Specifically, I want to investigate how to categorize the diffusion of misinformation: is it a simple contagion or a complex one? A recent study shows the spread of controversial news is a complex contagion. However, controversial news pieces are not necessarily sources of misinformation. In addition, diffusion patterns of true and false rumors differ. Therefore, studies that focus on the

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propagation of false rumors are necessary. I would also like to examine whether misinformation travels more often through weak ties or strong ties. Homogeneity drives the spread of conspiracy news, and false news diffuses through a peer-to-peer channel rather than through broadcasting. In this regard, strong ties within a homophilous network seem to be more effective paths. This leads to my last questions: What are the characteristics of people who are most likely to spread misinformation? Are their ego networks highly clustered or not? Do their neighbors belong to different components of a network or not?

At UC Davis, I would like to work with Professor Martin Hilbert and Cuihua Shen since their research applies computational methods to the study of social networks. After finishing my PhD, I aspire to become a professor.